OPHTHALMOLOGY.

UNDER THE CHARGE OF
EDWARD JACKSON, A.M., M.D.,
OF DENVER, COLORADO,
AND
T. B. SCHNEIDEMAN, A.M., M.D.,
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC.

Pigmentation of the Iris, Cornea, and Lens.—VOSSIUS (*Centralbl. f. prak. Augenhk.*, September, 1910, p. 257) finds that following operations upon the iris in iritis, glaucoma, cataract, as well as after injuries of the eye involving tears of the iris, a peculiar, almost jet-black deposit of pigment occurs upon the anterior surface of the iris; the pigment is most saturated in the pupillary region, and is occasionally observed upon the posterior surface of the cornea. The pigment is derived from the retinal pigment layer of the iris, particles of which occasionally become detached, sink down at the bottom of the anterior chamber, or float freely in the aqueous humor, or attach themselves to the anterior surface of the iris. At times such pigmentation is observed upon the iris and posterior surface of the cornea in iritis without iridectomy; very rarely the pigment is also found upon the posterior surface of the lens without iritis. Such pigmentation may remain unchanged for years. A deposit of pigment also occurs occasionally upon the anterior surface of the iris, when bits of iron remain in the eyeball with siderosis of the iris; and also after absorption of hemorrhages into the anterior chamber. In siderosis, the color of the pigment is dark sepia brown; following absorption from hemorrhages, the shade ranges from reddish brown to chestnut brown. This pigmentation is not identical with the coarse light yellowish red and brownish pigment points found near so-called pigment nevi, or without the latter. In siderosis the particles evidently consist of oxide of iron; in hemorrhages into the chamber they are composed of hemosiderin, such as is found by microscopic examination, in the form of small brownish particles with crystal reflex upon the anterior surface and within the anterior layers of the iris.

The Path of Entrance Into the Eye of the Virus of Rabies.—KOENIGSTEIN and HOLOBUT (*Archiv f. Augenhk.*, April, 1910, p. 6) find, with Fukala and Kraus, that next to subdural inoculation, insertion into the eye gives the most certain results. General infection may be avoided if the cornea is abscised or destroyed within six hours after inoculation. The virus enters the anterior chamber and reaches the encephalon by way of the optic nerve. Preliminary section of the optic nerve, as well as section of the same or enucleation a short time after insertion of the virus into the cornea, will prevent generalization. Both subdural and corneal inoculation render an emulsion of the optic nerve infectious.

Ocular Mycosis.—MORAX (*Archiv. d'ophtal.*, October, 1910, p. 654) reports two new cases of primary palpebral sporotrichosis; in both the diagnosis was established by cultures showing Sporothrix Beurmanni; in the first case treated by iodide of potassium, the infection disappeared at the end of three months. The same author observed a third case of mycosis of the cornea. The patient, aged forty years, showed a white spot involving a quarter of the cornea, resembling a false membrane, accompanied by slight hypopyon; the galvanocautery effected a cure.

Accommodative Changes in Man.—HESS (*Archiv f. Augenhk.*, lxv, 170) was able to observe the accommodative changes in the lens, ciliary body, and pupil with the binocular loup in an eye removed immediately after death; the globe was divided and strongly illuminated from behind, and the cornea laid upon electrodes. He saw clearly how the ciliary processes moved forward and toward the axis; the contraction of the pupil reached its maximum before the advance of the ciliary, while the latter slightly preceded dilatation. Although the subject was sixty-four years old, and hence deprived of accommodation, the ciliary body was still capable of active contractions.

The same observer also examined eyes by a similar arrangement in some of which eserine and in others atropine had been instilled *ante exitum*. The first pair belonged to a subject aged twenty, the second forty-two, and the third sixty-eight years respectively. In the eyes from the twenty-year-old individual, the equatorial diameter of the one treated with eserine was 0.4 to 0.5 mm. smaller than the atropinized eye and the same was the case with the ciliary circle; in the eyes from the individual, aged sixty-eight years, there was no perceptible difference in these structures. This is the first instance in which the accommodative changes of the human lens were observed under fixation. Hess believes that this method is very promising as regards many other questions.

Relation of the Anterior Region of the Corpora Quadrigemina to the Pupillary Reflex.—LEVINSOHN (*Centralbl. f. prak. Augenhk.*, March, 1910, p. 92) finds from experimental researches that the course of the centripetal pupillary fibers can be followed only as far as the external geniculate body. The continuation of these paths, particularly their connection with the oculomotor nucleus, is not known. It is certain, however, that the entire anterior quadrigeminal body, inclusive of the layers extending to the base of the aqueductus sylvii, is not concerned with the conduction of the light reflex of the pupil.

Glaucoma Cured by Simple Section of the Iris.—ABADIE (*Archives d'Ophtal.*, August, 1910, p. 518) has always maintained that the curative effect of iridectomy in glaucoma is due to section of the circular nervous plexus which the iris is supposed to contain. If this is the fact, more or less extensive excision of the membrane is unnecessary; a simple section should suffice, extending from the pupillary border to the ciliary insertion, thus dividing the circular nervous network which the cut traverses. He reports a case which seems to confirm this hypothesis.